



ITS-101A

Internet TCP/IP Protocol Training System

Descripción

The Internet has permeated among our daily life in every aspect, and it provides the fundamental connection with many state-of-the-art technology such as third-generation cell phones, video communication and information appliances.

The core technology of the Internet is TCP/IP protocol suite. Understanding TCP/IP protocol suite is crucial to users of the Internet at all levels, and it facilitates better application of the Internet. Internet TCP/IP Protocol Training System is designed to meet this need.

There are seven layers of TCP/IP protocol, and from the second to the fourth of which plays the key role in operating system kernels such as Linux and Windows which are difficult for users to understand. Internet TCP/IP Protocol Training System not only reveals the inner workings of TCP/IP protocol software, but also provides methods to modify the behavior of TCP/IP protocol software for experiment purpose.

Otra Información



1. Real-time packet monitor.
 - Observe TCP segments, IP datagrams, ICMP datagrams, UDP datagrams and Ethernet frames.



2. Packet generator.
 - Generate actual TCP segments, IP datagrams, ICMP datagrams, UDP datagrams and Ethernet frames.
 - Manual or programmable packet generation (packet size up to 1500 bytes).



3. Congestion generator.
 - User programmable packet generation speed up to 1.2 Mbps.
 - User programmable packet delay, error and lost.



4. Programmable router.
 - Configurable as a router or host.
 - Can emulate as a firewall or NAT.
 - Provide a platform to install user-defined network message procedures for experiment.



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Listado de Experimentos

- Ethernet messages sending & observing.
- MAC address discovery.
- Address Resolution Protocol (ARP).
- ICMP ping and checksum.
- IP direct delivery and IP routing using default gateway.
- IP routing using Next-Hop routing.
- TTL in IP routing.
- Trace of IP routing.
- Path MTU discovery.
- Network disturbance for IP.
- Error control.
- Sliding window.
- Congestion avoidance.
- Full TCP implementation.
- TCP vs. UDP.
- The domain name system.
- Echo.
- SMTP client.
- HTTP.
- Telnet.
- FTP.
- NAT.
- Firewall.
- Proxy ARP.
- IP aliasing.